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REMARKS

This response is intended as a full and complete response to the non-final Office Action mailed March 20, 2006. In the Office Action, the Examiner noted that claims 27-35 and 48-56 are pending and rejected under 35 U.S.C. §103. By this response, Applicants have amended claims 27 and 48. The remaining claims continue unamended.

In view of the following discussion, Applicants submit that the claims pending in the application are non-obvious under the provisions of 35 U.S.C. §103. Thus, Applicants believe that the application is in condition for allowance.

It is to be understood that Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or of Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant responsive amendments.

Claim Objections

The Examiner has objected to claims 27 and 48 because "the word 'headend' appears to be a typo it should have been 'head-end.'" Applicants have amended claims 27 and 48 to change "headend" to "head-end." Moreover, Applicants have amended claim 27 in response to a grammatical error (i.e. to replace the term "each said" with "each" in line 13). As such, the Examiner's objection should be withdrawn.

Rejection under 35 U.S.C. §103(a) of Claims 27-29, 31-35, 48-50, and 53-56

The Examiner has rejected claims 27-29, 31-35, 48-50 and 53-56 under 35 U.S.C. §103(a) as being unpatentable over Herrmann et al. (U.S. Patent No. 6,134,707, hereinafter "Herrmann") and further in view of Tang (U.S. Patent No. 6,389,321, hereinafter "Tang") and further in view of Sasaki (U.S. Patent 6,198,304, hereinafter "Sasaki") and further in view of Sawicz et al. (U.S. Patent 5,889,775, hereinafter "Sawicz"). The rejection is respectfully traversed.

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To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. As discussed in Applicants' response to the Office Action mailed October 7, 2005, the Hermann, Tang, Sasaki and Sawicz references, alone or in combination, fail to teach or suggest all of the limitations recited in claim 27, and thus fail to teach or suggest Applicants' invention as a whole.

Claim 27 recites the following (with references added to simplify the subsequent discussion):

A method for programming at least one programmable logic device in a video switch, said video switch capable of transferring video information between a video server and subscriber equipment of a television program delivery system, said method comprising:

- (a) programming a first file, in a non-native format for programming said at least one programmable logic device, at a remote programmer source;
- (b) converting said non-native format programmable logic instructions into a second file having programmable logic instructions in a format native to said at least one programmable logic device;
- (c) transferring said second file to a head-end controller at a cable head-end of said television program delivery system;
- (d) transferring said second file from said head-end controller to said video switch comprising a processor board coupled to a plurality of functional elements, each functional element comprising a programmable logic device coupled to a switching circuit;
- (e) executing said converted file, for identifying particular target files associated with said programmable logic devices, via a first bus coupled to said switching circuits;
- (f) enabling the switching circuit corresponding to each programmable logic device having said identified target files via said first bus; and
- (g) programming said identified programmable logic devices via a second bus coupled to said switching circuit.

The Hermann arrangement operates entirely differently than the claimed invention. Specifically, Hermann provides a digital system including a programmable logic device (PLD) which receives an advanced programming language (APL) file, which is then processed by an interpreter to be compatible with an embedded controller, the embedded controller subsequently providing control signals for programming the PLD. Essentially, a file in a generic APL format, is provided to the digital system including the PLD; an interpreter in the digital system adapts the APL file such that an embedded controller in the digital system can convert the APL file instructions into

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native instructions for the PLD. Version control is handled by conditionally processing the APL file in response to electronic signatures associated with the PLDs. That is, based on the type or versions of PLDs to be programmed (or protocol associated with the PLD to be programmed), portions of the source code forming the APL file are selectively used or not used to form the native instructions for the PLD.

The Office Action contends that "programming a first file in a non-native format for programming said one or more programmable logic devices from a remote programmer source is taught by Herrmann (abstract), which states that "a device configuration program with adaptive programming source code instructions (non-native format) that characterize device (programmable) configuration instructions and data." Applicants strongly disagree. The "adaptive programming source code instructions" are standard instructions used in many compiler implementations to selectively process source code. As noted in the abstract, "adaptive source code instructions may include conditional branches, subroutines, variables, configurable arrays, integer operators, and Boolean operators." These do not comprise non-native instructions.

Further to the above, there are numerous differences between the Herrmann arrangement and the claimed invention, including (with claim references and specification references added):

(1) The claimed invention contemplates generating (step b) native-format PLD instructions (e.g., JBC of FIG 4) at, for example, a remote programmer source (e.g., 310) and then transferring (step c) the native-format PLD instructions (second file) to a head-end controller (e.g., HEC 320) at a cable television head-end, for subsequent transfer (step d) to a video switch (e.g., 330) ultimately associated with a PLD to be programmed.

By contrast, Herrmann only converts a data file to native-format PLD instructions at the digital system including the PLD. There is no transferring of native-format PLD instructions, much less the claimed transferring to a cable television head-end controller or transferring to a video switch.

(2) The claimed invention further contemplates executing, via a first bus coupled to switching circuits, the second file to identify particular target files associated

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with the PLDs and enabling the switching circuit corresponding to each PLD having a target file identified via the first bus such that the PLDs are programmed using a second bus coupled to the switching circuit.

By contrast, Herrmann utilizes an embedded controller 52 including an interpreter 54 that is directly coupled to a PLD to be programmed. There is no switching circuit utilized or even necessary due to the direct coupling of the embedded controller and PLD. Moreover, there is no discussion within Herrmann of a first bus and a second bus, much less the control functionality claimed herein with respect to the first bus and second bus.

Thus, contrary to the assertions within the Office Action, the Herrmann reference simply does not teach the alleged portions of the claims.

The Tang reference is directed to simultaneous wired and wireless remote in-system programming of multiple remote systems. Essentially, an in-system programmable (ISP) system is remotely accessed and programmed via a data network or channel. Programming data and control data (such as according to the ispSTREAM file format, top of column 3) are conveyed via any wired or wireless network. As noted by the Examiner, the Tang reference (as well as the Herrmann reference) fails to disclose the "switching circuit...."

The Sasaki reference is directed to a specific implementation of a logic cell for a PLD including random access memory adapted to selectively provide additional logic functions (or more memory).

The Tang and Sasaki references failed to bridge the gap between the Herrmann reference and the claimed invention for least the reasons discussed above. In addition, the "switching" functions discussed on page 5 of the Office Action have nothing to do with the video switch and related switching functions as claimed.

As noted by the Examiner, none of the above-cited references disclose "transferring said second file to a head end controller at a cable head-end of said television program delivery system." This is correct, since the various references have nothing to do with a head-end controller at a cable head-end.

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In addition to the above deficiencies, the Hermann, Tang and Sasaki references, alone or in combination, fail to teach or suggest at least the "video switch capable of transferring video information between a video server and subscriber equipment of a television program delivery system," the "transferring said second file to a head-end controller at a cable head-end of said television program delivery system," and the "transferring said second file from said head-end controller to said video switch" as recited in claim 27.

Thus, the Hermann, Tang and Sasaki references, alone or in combination, fail to teach or suggest the present invention, as claimed, as a whole.

The Sawicz reference fails to bridge the gap between the above-cited references and the claimed invention. Sawicz discloses a multi-stage switch, including input and output stages for, respectively, receiving and distributing information signals. A middle stage establishes a plurality of signal paths between the input stage and output stage according to a routing function having the ability to reallocate existing paths to free paths to avoid thereby signal blocking.

The Office Action contends that Sawicz discloses "transferring said second file to a head-end controller at a cable head-end of said television program delivery system," citing column 7, lines 10-41, figure 6 and figure 7. Applicants strongly disagree. The Office Action is equating the updating of a routing table with the claimed structure. This is incorrect. The claim element in question positively recites the transferring of a second file (having a particular file format) to a particular functional element (a controller) in the cable television head-end. This has nothing to do with the simple switch fabric of Sawicz arrangement.

As such, independent claim 27 is allowable under 35 U.S.C. §103. Moreover, independent claim 48 contains substantially similar relevant limitations as those discussed above in regards to claim 27, and is therefore also allowable under 35 U.S.C. §103. Furthermore, claims 28-29, 31-35, 49-50, and 53-56 depend directly or indirectly from independent claims 27 and 48 and recite additional features thereof. As such, and at least for the same reasons set forth above, these claims are also allowable under 35 U.S.C. §103. Therefore, Applicants respectfully request that the rejection be withdrawn.

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Discussion of applicable of references

Applicants believe that the Examiner is improperly using hindsight to piece together the claimed invention using many disparate references. The invention as claimed positively recites various limitations. The reference associated with programming a remotely-located PLD is relevant (i.e., Herrmann). However, the other references are taken entirely out of their respective contexts to allegedly contribute disclosure amounting to bits and pieces of the claimed invention. The reference providing a mere PLD (i.e., Sasaki), the reference providing a switch fabric (i.e., Sawicz), and the reference describing (in essence) peer to peer programming of workstations (i.e., Tang) are not combinable, nor do they teach, as suggested in the Office Action. Finally, even if the various references are deemed to be relevant to some minimum extent, Applicants respectfully note that a combination of these references would be inoperable and still fail to teach the limitations of the above-discussed claims.

Rejection under 35 U.S.C. §103(a) of Claim 52

The Examiner has rejected claim 52 under 35 U.S.C. §103(a) as being unpatentable over Herrmann, Tang, Sasaki and further in view of allegedly admitted prior art. Applicants respectfully traverse the rejection.

Claim 52 depends directly from independent claim 48. Moreover, for at least the reasons discussed above, the Herrmann, Tang and Sasaki references fail to teach or suggest Applicants' invention as recited in claim 48. Accordingly, any attempted combination of the Herrmann, Tang and Sasaki references with any other additional references, in a rejection against the dependent claim, would still result in a gap in the combined teachings in regards to the independent claim. As such, Applicants submit that dependent claim 52 is patentable under 35 U.S.C. §103.

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

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Rejection under 35 U.S.C. §103(a) of Claims 30 and 51

The Examiner has rejected claims 30 and 51 under 35 U.S.C. §103(a) as being unpatentable over Herrmann, Tang, Sasaki in view of technical paper published in May 1999, ver. 6, hereinafter called Altera Corporation. Applicants respectfully traverse the rejection.

Claims 30 and 51 depend directly from independent claims 27 and 48. Moreover, for at least the reasons discussed above, the Hermann, Tang and Sasaki references fail to teach or suggest Applicants' invention as recited in claims 27 and 48. Accordingly, any attempted combination of the Hermann, Tang and Sasaki references with any other additional references, in a rejection against the dependent claims, would still result in a gap in the combined teachings in regards to the independent claim. As such, Applicants submit that dependent claims 30 and 51 are patentable under 35 U.S.C. §103.

Therefore, Applicants respectfully request that the Office Action's rejection be withdrawn.

SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

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CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that the claims presently in this application are non-obvious under the provisions of 35 U.S.C. §103. Applicants believe that this application is in condition for allowance. Reconsideration of this application and its swift passage to issue are respectfully solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall, at (732) 530-9404, so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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